



RUJ-001CNCPRCE2

SEQUENCE LISTING

<110> Hawiger, Daniel
Steinman, Ralph M.
Nussenzweig, Michel C.

<120> Enhanced Antigen Delivery and Modulation
of the Immune Response Therefrom

<130> RUJ-001CNCPRCE2

<140> 09/925,284
<141> 2001-08-09

<150> 09/586,704
<151> 2000-06-05

<150> 08/381,528
<151> 1995-01-31

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acaggaac 68

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RUJ-001CNCPRCE2

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<211> 30

<212> PRT

<213> Homo sapiens

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Gly	Val	Asn	Glu	Asp	Glu	Ile	Met	Leu	Pro	Ser	Phe	His	Asp		
		20						25					30		

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Gly	Lys	Cys	Ile	Gln	Pro	Leu	Phe	Asp							
		20						25							

<210> 9

RUJ-001CNCPRCE2

<211> 19
<212> PRT
<213> mus musculus

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Gly Lys Cys

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20 25 30
Asn Asp Pro Phe Thr Ile Val His Glu Asn Thr Gly Lys Cys Ile Gln
35 40 45
Pro Leu Ser Asp Trp Val Val Ala Gln Asp Cys Ser Gly Thr Asn Asn
50 55 60
Met Leu Trp Lys Trp Val Ser Gln His Arg Leu Phe His Leu Glu Ser
65 70 75 80
Gln Lys Cys Leu Gly Leu Asp Ile Thr Lys Ala Thr Asp Asn Leu Arg
85 90 95
Met Phe Ser Cys Asp Ser Thr Val Met Leu Trp Trp Lys Cys Glu His
100 105 110
His Ser Leu Tyr Thr Ala Ala Gln Tyr Arg Leu Ala Leu Lys Asp Gly
115 120 125
Tyr Ala Val Ala Asn Thr Asn Thr Ser Asp Val Trp Lys Lys Gly Gly
130 135 140
Ser Glu Glu Asn Leu Cys Ala Gln Pro Tyr His Glu Ile Tyr Thr Arg
145 150 155 160
Asp Gly Asn Ser Tyr Gly Arg Pro Cys Glu Phe Pro Phe Leu Ile Gly
165 170 175
Glu Thr Trp Tyr His Asp Cys Ile His Asp Glu Asp His Ser Gly Pro
180 185 190
Trp Cys Ala Thr Thr Leu Ser Tyr Glu Tyr Asp Gln Lys Trp Gly Ile
195 200 205
Cys Leu Leu Pro Glu Ser Gly Cys Glu Gly Asn Trp Glu Lys Asn Glu
210 215 220
Gln Ile Gly Ser Cys Tyr Gln Phe Asn Asn Gln Glu Ile Leu Ser Trp
225 230 235 240
Lys Glu Ala Tyr Val Ser Cys Gln Asn Gln Gly Ala Asp Leu Leu Ser
245 250 255
Ile His Ser Ala Ala Glu Leu Ala Tyr Ile Thr Gly Lys Glu Asp Ile
260 265 270
Ala Arg Leu Val Trp Leu Gly Leu Asn Gln Leu Tyr Ser Ala Arg Gly
275 280 285
Trp Glu Trp Ser Asp Phe Arg Pro Leu Lys Phe Leu Asn Trp Asp Pro
290 295 300
Gly Thr Pro Val Ala Pro Val Ile Gly Gly Ser Ser Cys Ala Arg Met
305 310 315 320
Asp Thr Glu Ser Gly Leu Trp Gln Ser Val Ser Cys Glu Ser Gln Gln

				325					330					335	
Pro	Tyr	Val	Cys	Lys	Lys	Pro	Leu	Asn	Asn	Thr	Leu	Glu	Leu	Pro	Asp
			340					345					350		
Val	Trp	Thr	Tyr	Thr	Asp	Thr	His	Cys	His	Val	Gly	Trp	Leu	Pro	Asn
			355				360					365			
Asn	Gly	Phe	Cys	Tyr	Leu	Leu	Ala	Asn	Glu	Ser	Ser	Ser	Trp	Asp	Ala
						375					380				
Ala	His	Leu	Lys	Cys	Lys	Ala	Phe	Gly	Ala	Asp	Leu	Ile	Ser	Met	His
385						390				395					400
Ser	Leu	Ala	Asp	Val	Glu	Val	Val	Val	Thr	Lys	Leu	His	Asn	Gly	Asp
				405						410				415	
Val	Lys	Lys	Glu	Ile	Trp	Thr	Gly	Leu	Lys	Asn	Thr	Asn	Ser	Pro	Ala
			420					425					430		
Leu	Phe	Gln	Trp	Ser	Asp	Gly	Thr	Glu	Val	Thr	Leu	Thr	Tyr	Trp	Asn
			435				440					445			
Glu	Asn	Glu	Pro	Ser	Val	Pro	Phe	Asn	Lys	Thr	Pro	Asn	Cys	Val	Ser
						455					460				
Tyr	Leu	Gly	Lys	Leu	Gly	Gln	Trp	Lys	Val	Gln	Ser	Cys	Glu	Lys	Lys
465					470					475					480
Leu	Arg	Tyr	Val	Cys	Lys	Lys	Lys	Gly	Glu	Ile	Thr	Lys	Asp	Ala	Glu
				485						490				495	
Ser	Asp	Lys	Leu	Cys	Pro	Pro	Asp	Glu	Gly	Trp	Lys	Arg	His	Gly	Glu
			500					505					510		
Thr	Cys	Tyr	Lys	Ile	Tyr	Glu	Lys	Glu	Ala	Pro	Phe	Gly	Thr	Asn	Cys
			515				520					525			
Asn	Leu	Thr	Ile	Thr	Ser	Arg	Phe	Glu	Gln	Glu	Phe	Leu	Asn	Tyr	Met
						535					540				
Met	Lys	Asn	Tyr	Asp	Lys	Ser	Leu	Arg	Lys	Tyr	Phe	Trp	Thr	Gly	Leu
545					550					555					560
Arg	Asp	Pro	Asp	Ser	Arg	Gly	Glu	Tyr	Ser	Trp	Ala	Val	Ala	Gln	Gly
				565					570					575	
Val	Lys	Gln	Ala	Val	Thr	Phe	Ser	Asn	Trp	Asn	Phe	Leu	Glu	Pro	Ala
			580					585					590		
Ser	Pro	Gly	Gly	Cys	Val	Ala	Met	Ser	Thr	Gly	Lys	Thr	Leu	Gly	Lys
			595				600					605			
Trp	Glu	Val	Lys	Asn	Cys	Arg	Ser	Phe	Arg	Ala	Leu	Ser	Ile	Cys	Lys
						615					620				
Lys	Val	Ser	Glu	Pro	Gln	Glu	Pro	Glu	Glu	Ala	Ala	Pro	Lys	Pro	Asp
625					630					635					640
Asp	Pro	Cys	Pro	Glu	Gly	Trp	His	Thr	Phe	Pro	Ser	Ser	Leu	Ser	Cys
				645					650					655	
Tyr	Lys	Val	Phe	His	Ile	Glu	Arg	Ile	Val	Arg	Lys	Arg	Asn	Trp	Glu
			660					665					670		
Glu	Ala	Glu	Arg	Phe	Cys	Gln	Ala	Leu	Gly	Ala	His	Leu	Pro	Ser	Phe
			675				68								

Tyr	Glu	Glu	Ala	Val	Leu	Tyr	Cys	Ala	Ser	Asn	His	Ser	Phe	Leu	Ala	835	840	845
Thr	Ile	Thr	Ser	Phe	Thr	Gly	Leu	Lys	Ala	Ile	Lys	Asn	Lys	Leu	Ala	850	855	860
Asn	Ile	Ser	Gly	Glu	Glu	Gln	Lys	Trp	Trp	Val	Lys	Thr	Ser	Glu	Asn	865	870	875
Pro	Ile	Asp	Arg	Tyr	Phe	Leu	Gly	Ser	Arg	Arg	Arg	Leu	Trp	His	His	885	890	895
Phe	Pro	Met	Thr	Phe	Gly	Asp	Glu	Cys	Leu	His	Met	Ser	Ala	Lys	Thr	900	905	910
Trp	Leu	Val	Asp	Leu	Ser	Lys	Arg	Ala	Asp	Cys	Asn	Ala	Lys	Leu	Pro	915	920	925
Phe	Ile	Cys	Glu	Arg	Tyr	Asn	Val	Ser	Ser	Leu	Glu	Lys	Tyr	Ser	Pro	930	935	940
Asp	Pro	Ala	Ala	Lys	Val	Gln	Cys	Thr	Glu	Lys	Trp	Ile	Pro	Phe	Gln	945	950	955
Asn	Lys	Cys	Phe	Leu	Lys	Val	Asn	Ser	Gly	Pro	Val	Thr	Phe	Ser	Gln	965	970	975
Ala	Ser	Gly	Ile	Cys	His	Ser	Tyr	Gly	Gly	Thr	Leu	Pro	Ser	Val	Leu	980	985	990
Ser	Arg	Gly	Glu	Gln	Asp	Phe	Ile	Ile	Ser	Leu	Leu	Pro	Glu	Met	Glu	995	1000	1005
Ala	Ser	Leu	Trp	Ile	Gly	Leu	Arg	Trp	Thr	Ala	Tyr	Glu	Arg	Ile	Asn	1010	1015	1020
Arg	Trp	Thr	Asp	Asn	Arg	Glu	Leu	Thr	Tyr	Ser	Asn	Phe	His	Pro	Leu	1025	1030	1035
Leu	Val	Gly	Arg	Arg	Leu	Ser	Ile	Pro	Thr	Asn	Phe	Phe	Asp	Asp	Glu	1045	1050	1055
Ser	His	Phe	His	Cys	Ala	Leu	Ile	Leu	Asn	Leu	Lys	Lys	Ser	Pro	Leu	1060	1065	1070
Thr	Gly	Thr	Trp	Asn	Phe	Thr	Ser	Cys	Ser	Glu	Arg	His	Ser	Leu	Ser	1075	1080	1085
Leu	Cys	Gln	Lys	Tyr	Ser	Glu	Thr	Glu	Asp	Gly	Gln	Pro	Trp	Glu	Asn	1090	1095	1100
Thr	Ser	Lys	Thr	Val	Lys	Tyr	Leu	Asn	Asn	Leu	Tyr	Lys	Ile	Ile	Ser	1105	1110	1115
Lys	Pro	Leu	Thr	Trp	His	Gly	Ala	Leu	Lys	Glu	Cys	Met	Lys	Glu	Lys	1125	1130	1135
Met	Arg	Leu	Val	Ser	Ile	Thr	Asp	Pro	Tyr	Gln	Gln	Ala	Phe	Leu	Ala	1140	1145	1150
Val	Gln	Ala	Thr	Leu	Arg	Asn	Ser	Ser	Phe	Trp	Ile	Gly	Leu	Ser	Ser	1155	1160	1165
Gln	Asp	Asp	Glu	Leu	Asn	Phe	Gly	Trp	Ser	Asp	Gly	Lys	Arg	Leu	Gln	1170	1175	1180
Phe	Ser	Asn	Trp	Ala	Gly	Ser	Asn	Glu	Gln	Leu	Asp	Asp	Cys	Val	Ile	1185	1190	1195
Leu	Asp	Thr	Asp	Gly	Phe	Trp	Lys	Thr	Ala	Asp	Cys	Asp	Asp	Asn	Gln	1205	1210	1215
Pro	Gly	Ala	Ile	Cys	Tyr	Tyr	Pro	Gly	Asn	Glu	Thr	Glu	Glu	Glu	Val	1220	1225	1230
Arg	Ala	Leu	Asp	Thr	Ala	Lys	Cys	Pro	Ser	Pro	Val	Gln	Ser	Thr	Pro	1235	1240	1245
Trp	Ile	Pro	Phe	Gln	Asn	Ser	Cys	Tyr	Asn	Phe	Met	Ile	Thr	Asn	Asn	1250	1255	1260
Arg	His	Lys	Thr	Val	Thr	Pro	Glu	Glu	Val	Gln	Ser	Thr	Cys	Glu	Lys	1265	1270	1275
Leu	His	Pro	Lys	Ala	His	Ser	Leu	Ser	Ile	Arg	Asn	Glu	Glu	Glu	Asn	1285	1290	1295
Thr	Phe	Val	Val	Glu	Gln	Leu	Leu	Tyr	Phe	Asn	Tyr	Ile	Ala	Ser	Trp	1300	1305	1310
Val	Met	Leu	Gly	Ile	Thr	Tyr	Glu	Asn	Asn	Ser	Leu	Met	Trp	Phe	Asp	1315	1320	1325
Lys	Thr	Ala	Leu	Ser	Tyr	Thr	His	Trp	Arg	Thr	Gly	Arg	Pro	Thr	Val			

1330	1335	1340
Lys Asn Gly Lys Phe Leu Ala Gly Leu Ser Thr Asp Gly Phe Trp Asp		
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Ile Gln Ser Phe Asn Val Ile Glu Glu Thr Leu His Phe Tyr Gln His		1360
	1365	1370
Ser Ile Ser Ala Cys Lys Ile Glu Met Val Asp Tyr Glu Asp Lys His		1375
	1380	1385
Asn Gly Thr Leu Pro Gln Phe Ile Pro Tyr Lys Asp Gly Val Tyr Ser		1390
	1395	1400
Val Ile Gln Lys Lys Val Thr Trp Tyr Glu Ala Leu Asn Ala Cys Ser		1405
	1410	1415
Gln Ser Gly Gly Glu Leu Ala Ser Val His Asn Pro Asn Gly Lys Leu		1420
1425	1430	1435
Phe Leu Glu Asp Ile Val Asn Arg Asp Gly Phe Pro Leu Trp Val Gly		1440
	1445	1450
Leu Ser Ser His Asp Gly Ser Glu Ser Ser Phe Glu Trp Ser Asp Gly		1455
	1460	1465
Arg Ala Phe Asp Tyr Val Pro Trp Gln Ser Leu Gln Ser Pro Gly Asp		1470
	1475	1480
Cys Val Val Leu Tyr Pro Lys Gly Ile Trp Arg Arg Glu Lys Cys Leu		1485
	1490	1495
Ser Val Lys Asp Gly Ala Ile Cys Tyr Lys Pro Thr Lys Asp Lys Lys		1500
1505	1510	1515
Leu Ile Phe His Val Lys Ser Ser Lys Cys Pro Val Ala Lys Arg Asp		1520
	1525	1530
Gly Pro Gln Trp Val Gln Tyr Gly Gly His Cys Tyr Ala Ser Asp Gln		1535
	1540	1545
Val Leu His Ser Phe Ser Glu Ala Lys Gln Val Cys Gln Glu Leu Asp		1550
	1555	1560
His Ser Ala Thr Val Val Thr Ile Ala Asp Glu Asn Glu Asn Lys Phe		1565
	1570	1575
Val Ser Arg Leu Met Arg Glu Asn Tyr Asn Ile Thr Met Arg Val Trp		1580
1585	1590	1595
Leu Gly Leu Ser Gln His Ser Leu Asp Gln Ser Trp Ser Trp Leu Asp		1600
	1605	1610
Gly Leu Asp Val Thr Phe Val Lys Trp Glu Asn Lys Thr Lys Asp Gly		1615
	1620	1625
Asp Gly Lys Cys Ser Ile Leu Ile Ala Ser Asn Glu Thr Trp Arg Lys		1630
	1635	1640
Val His Cys Ser Arg Gly Tyr Ala Arg Ala Val Cys Lys Ile Pro Leu		1645
	1650	1655
Ser Pro Asp Tyr Thr Gly Ile Ala Ile Leu Phe Ala Val Leu Cys Leu		1660
1665	1670	1675
Leu Gly Leu Ile Ser Leu Ala Ile Trp Phe Leu Leu Gln Arg Ser His		1680
	1685	1690
Ile Arg Trp Thr Gly Phe Ser Ser Val Arg Tyr Glu His Gly Thr Asn		1695
	1700	1705
Glu Asp Glu Val Met Leu Pro Ser Phe His Asp		1710
	1715	1720